Chandler • Arizona
Where Values Make The Difference

Civil Engineering
Water Plan Review Checklist

Log No:_____

Project:	
Location:	

Item Number Proofing Marks	
/	Requirement satisfied.
O	Requirement not satisfied.
?	Unable to determine status, more information is required.
X	Not applicable.

Review #	Reviewed By	Date
1		
2		
3		
4		
5		

The requirements referred to on the checklist can be found within Chapter 48 (Subdivisions) of the City Code and in the City's Technical Design Manuals.

Item	Requirement	Comments
	1. The water plans must conform to the requirements of the Construction Plans Review Checklist. 2. Show or correct the *Water Notes* on the cover or detail sheet.	

Mailing Address:
P.O. Box 4008, MS 408
Chandler, Arizona 85244-4008

Transportation and Development Department
Civil Engineering Plan Review
215 E. Buffalo St., Chandler Arizona 85225

Telephone: (480) 782-3000
Fax: (480) 782-3350
www.chandleraz.gov
Form No: UDM-031/Civil
Rev: 7-30-14

Item	Requirement	Comments

3. Place an index map with the following information on the cover sheet:
   A. Existing water system including fire hydrants and valves.
   B. Proposed water system including fire hydrants and valves.
   C. Pipe sizes.
   D. Sheet numbers.
   E. City limit lines where applicable.
   F. Existing water system with fire hydrants on perimeter is required.
   G. Phase limits and numbers if applicable.

4. Include the following signature block on the cover sheet:

   DOMESTIC WATER APPROVED:

   _____

   MARICOPA COUNTY DATE
   ENVIRONMENTAL SERVICES DEPT.

5. Acquire Maricopa County Environmental Services Department approval and signature.

6. Add the following note to the plan cover sheet:

   The following installation procedure shall be followed on all water line extensions of lines over eleven (11) months in age:

   A new valve of like size shall be installed in the new line extension at the point of extension. A 3/4" saddle and riser shall be installed in the line between the new valve and the first existing valve in the existing system. This line will be flushed and tested by the City and the 3/4" nut and riser removed.

   After the new water system is accepted by the City and the new valve and existing valve are turned on, the operating nut shall be removed from one or the other of the valves and abandoned.

Item	Requirement	Comments
7.	A service tap detail is required on the cover sheet showing the following items: A. Standard tap location. B. Minimum 6' separation between water and sewer taps. C. Standard detail number. D. Backflow prevention device location with standard detail number; see the following item for applicability.	
8.	Backflow prevention devices are required on the potable water services to: A. Chemical manufacturing plants. B. Hospitals. C. Mortuaries. D. Plating plants. E. Premises with auxiliary water supply or distribution systems. F. Reclaimed water users. G. Sewage treatment plants. H. Irrigation systems. I. Any other sites individually designated by the City's Water Distribution Supervisor.	
9.	The water line sizes must conform to the *City of Chandler Water Master Plan.*	
10	Show the scale on each sheet. See *Technical Design Manuals 1& 2 - Water and Wastewater System Design,* for requirements.	
11	Show all existing water lines being tied into and nearest fire hydrants.	
12	Provide dimensional ties for all existing water lines being tied into. Providing both a station number and a dimensional tie to the street centerline usually satisfies this requirement.	
13	Show all proposed water lines. Water lines are required adjacent to all streets.	
14	Water lines, fire lines, and water service lines are not	

Item	Requirement	Comments
	allowed to pass under retention basins. This does not apply to irrigation lines downstream of the backflow preventer.	
15	Water lines must be dimensioned from the street centerline.	
16	Install water lines in standard locations. See *Technical Design Manuals 1&2 - Water and Wastewater System Design* for details.	
17	Show all existing and proposed reclaimed water lines on the plans.	
18	A 1" water service, with stationing, is required to all single-family lots. Landscape tracts must be approved with services of a size as determined by the landscape architect and must be stationed.	
19	Show water stub-outs for all adjacent undeveloped property, unless otherwise justified. Also, provide water stub-outs for all major parcels within, or adjacent to, the development.	
20	Install ductile iron pipe (mechanical-joint or restrained-joint) through dip sections, including transitions to normal depth. Show all dip sections in profile view; include the following items: A. Minimum vertical clearance of 2' from obstructions. B. Concrete encasement per MAG Std Dtl 404 if applicable. C. Thrust blocks or joint restraint with standard detail call-out. D. Vertical and horizontal location of fittings.	
21	Show all crossings of existing or proposed utility lines in both plan and profile views. A. Water and sewer. B. Reclaimed water (4" or larger). C. C.I.P. projects also must include telephone, electric, gas, cable, and other buried utility lines where appropriate. The profile view requirement can be satisfied if the crossings are shown on separate sewer profile sheets.	
22	All water lines, including fire hydrant connections, which cross arterial streets must be installed as ductile iron pipe for all portions under pavement.	

Item	Requirement	Comments
23	Where extra protection for a waterline is required by MAG Std Dtl 404, including house service connections, the water line shall be ductile iron pipe and the sewer shall be encased in concrete.	
24	Cul-de-sac dead-end lines must have a fire hydrant installed at the end of line. Locate the fire hydrant 6' from back of curb and the valve in the pavement one foot from the lip of gutter.	
25	Whenever possible, extend dead-end lines beyond paved surfaces to avoid pavement cutting at time of future connection, and equip with a flushing pipe assembly per C-300. Install a gate valve on every dead end line between the last fitting and the flushing pipe assembly at the terminus of the line. The minimum distance between the gate valve and the flushing pipe assembly must be 20'.	
26	Valve installations must comply with the following: A. Distribution line (16" diameter and smaller), spacing no greater than 600'. B. Distribution line, three valves on each “tee” and four valves on each “cross”. C. Locate distribution line on a property line where appropriate. D. Transmission main (greater than 16" diameter) spacing no greater than one-half mile. E. Valve box installations must conform to C-307 and C-317; specify these details in the construction notes on the plan. F. Locate valves at intersections at the first lot line clear of the intersection, except as specified below. If no lot line exists or if no driveways front on the waterline side of the street along the leg of the tee (or cross) between the lot line and the intersection, locate the valve near the curb return at a minimum of 6' from the curb return. G. Locate valves at tee intersections laterally along the top of the tee to the first lot line clear of conflicts with sidewalk ramps, driveways, scuppers or other items, except as specified below. If no lot line exists or if no driveways front on the waterline side of the street along the top of the tee between the lot line and the intersection, locate the valve as close as practicable to the tee while avoiding conflicts, a minimum of 6' from the curb return. Locate valves on the leg of the tee per item F above.	

Item	Requirement	Comments
	H. Refer to valve blocking per MAG Std Dtl 301. I. No valve shall be located in a sidewalk, ramp or driveway. It may be necessary to abandon a valve in place, and locate a replacement clear of surface improvements. J. Valve locations must be stationed.	
27	Fire hydrant installations must comply with the following requirements: A. 450' maximum spacing in single-family residential areas. B. 300' maximum spacing in other developed areas. C. 1000' maximum spacing in undeveloped areas and arterial street frontages. D. Install a fire hydrant at subdivision entrances. E. Fire hydrant installations must conform to C-303, C-304, and C-305. F. Fire hydrants must be stationed. G. In cluster developments, locate fire hydrants no further than 250' from each structure, measured along a hose-laying line to the farthest corner of the structure.	
28	If a model home area is to be a part of the project the following is required: Provide a fire hydrant at or near the site entrance, located within 75' of the access roadway. Locate a hydrant within 300' of each structure measured along a hose-laying line to the farthest corner of the structure. Connect the hydrant to an approved water source. If the water source line is longer than 400', it must be looped to an additional source.	
29	A street cut application must be submitted to the City and approved by the City Engineer prior to plan approval. The status of your application is: A. Please submit application. B. Application is currently under review. C. Application has been denied. D. Application has been approved.	

Item	Requirement	Comments
30	An easement or right-of-way dedication is required by separate instrument. Please provide the following exhibits and/or information along with the easement document: A. Subdivision name. B. Type of easement/R.O.W. C. Reason or purpose of the easement/R.O.W. D. Vicinity map showing major cross streets. E. Legal description with RLS certification. F. Detail map showing the easement/R.O.W. alignment with dimensions and bearings, true point of beginning, section, township and range. G. Current title report.	

Prior checklists and plans are required for subsequent submittals.

For City Use
1. Water Distribution Supervisor review?